

USSR

UDC 621.382.2

GONCHAROV, V. N., KLYUCHNIKOV, V. N., KRYLOV, I. N., LAVRESHIN, Yu. A.,
LONCHIN, M. A., SEREZHKIN, Yu. N., UCHAYKIN, I. G., and YAMASHKIN, Yu. M.

"Role of Microplasma Phenomena in Determining the Properties of Silicon
Avalanche Rectifiers"

Uch. zap. Mordovsk. un-t (Scientific Notes of Mordovskiy University), 1970,
Issue 82, pp 3-20 (from RZh-Elektronika i yeye primeneniya, No 8, August 1971,
Abstract No 8B195)

Translation: The effect of microplasma phenomena on the characteristics of avalanche
rectifiers is considered. A model of the microplasma is presented and the reasons
for formation of microplasma are considered. The distribution of microplasma in
avalanche rectifiers is presented for the area of the p-n junction and for breakdown
voltages. Means are considered for an increase of the breakdown energy of avalanche
rectifiers. Summary.

1/1

UDC: 538.574.4

USSR

VVEDENSKIY, V. N., CHERNYAYEV, Ye. N., KRYLOV, I. S., and ROMANOV, S. I.

"Transformation of the Stokes Parameters in Electromagnetic Wave Backscattering"

Gor'kiy, Izvestiya VUZ -- Radiofizika, vol 15, No 4, 1972, pp 601-609

Abstract: The purpose of this paper is to establish a connection between the elements of the interaction matrix and the parameters of the scattered field that can be measured in practice with relative ease, where the interaction matrix is the expression of the interaction of the radiation with a reflecting object and can be defined by $\bar{S}_2 = M\bar{S}_1$, where $\bar{S}_2$ and $\bar{S}_1$ are the vector parameters of the reflected and incident waves respectively and M is the matrix. The analysis is conducted under the following limitations: the object is irradiated by a plane electromagnetic wave; the polarization transformation is considered for the reflection only; and only the case of reflection is considered in which it is described by linear, homogeneous equations. The computation of the generalized correlation coefficient of the linear orthogonal scatter field components for radiation with arbitrary elliptical

1/2

USSR

UDC: 538.574.4

Vvedenskiy, V. N., et al, Izvestiya VUZ --- Radiofizika, vol 15,
No 4, 1972, pp 601-609

polarization is given as an example of implementation of the authors' methods. The authors thank Ye. M. Kuchkov for his assiduous attention to the work.

2/2

- 109 -

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UFG 621.365 1970.149.c:57

USUR
KHROMOV, B.M., KRYLOV, E.I., KOROZNEVICH, N.S., GINZVA, YE.YE., ZAKHARCHENKO, V.P.,
BOGDANOV, M.P.

"Test Of The Use Of A Laser During Surgical Operations (Experimental Studies)"

[Maukh.tr.] Lenin-r. in-ta usoverah. vrachev in. S.M. Kirova (pochinila 16 marta)
Leningrad Institute For the Improvement Of Doctors (Imeni S.M. Kirova). 1971, Issue
97, pp 64-67 (From Rzh--Radiotekhnika, No 9, Sept 1971, Abstrakt No 9019)

37, pp 84-87 (1964) ~~_____~~

Translation: The paper describes the use of a laser for dissection of soft tissues and organs of animals with the aid of a laser at the Department [university] of Experimental Surgery of the Leningrad Institute For The Improvement Of Doctors. The continuous operation CO₂ laser with a power up to 20 watts had a 0.5 mm wide beam. The depth of the cut amounted to 18 mm (liver of a dog). Cutting off parts of the organs took place ergonomically; the surface of the cut was dry and of a distinct brown color with longitudinal stripes proceeding into the interior. Coagulated tissue is disposed on the line of the cut and in the adjoining tissues necrotic and necrobiotic changes develop with subsequent replacement of their sloughing tissues and formation of a scar. 1 ill. 1 tab. V.I.

111

- 84 -

RUSS

USSR (Soviet Union) 1971

KRYLOV, K.I., PROKOPENKO, V.T., BOGDANOV, N.P.

"CO₂ Laser For Experimental Surgery"

[Transl. tr.] Leningr. in-ta usoversh. vrachov in. S.M. Sirova (Scientific Center of Leningrad Institute For The Improvement Of Doctors (S.M. Sirova), 1971, Issue 97, pp 41-44 (from RZh--Radiotekhnika, No 9, Sept 1971, Abstract No 16133)

Translation: A CO₂ laser in a continuous regime is described. A mixture of CO₂--N₂--He is continuously pumped through a discharge tube, between the electrodes of which a glow discharge is excited. The gas-discharge tube 2.5-m long and 50-mm in diameter fabricated from electrolytic glass has water cooling and is isolated with terminal units [block] by means of sylphons. The supply of 50-m alternating current takes place across a ferroresonance stabilizer, a step-up transformer, and a ballast resistance. The resonator is formed by plane and spherical (R = 150 cm) mirrors. The focusing lens (BAM₂, F = 150 cm) makes it possible to concentrate the beam at a spot 0.5 mm in diameter with a power density up to 35 watt/mm². [Leningrad Institute Of Precision Mechanics And Optics.] 3 ill. 14 ref. V.I.

1/1

1/2 015 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--PLASTIC PROCEDURES WITH TRIANGLE COUNTERGRAFTS IN SURGERY OF BURNS
-U-
AUTHOR--KRYLOV, K.M. *R*
COUNTRY OF INFO--USSR
SOURCE--VESTNIK KHIRURGII IMENI I. I. GREKOVA, 1970, VOL 104, NR 3, PP
83-85
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PLASTIC SURGERY, SKIN GRAFT, BURN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1986/0624

STEP NO--UR/0589/70/104/003/0083/0085

CIRC ACCESSION NO--APO102610

UNCLASSIFIED

2/2 015
CIRC ACCESSION NO--AP0102610

UNCLASSIFIED

PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE PAPER THE EXPERIENCE WITH
TRIANGLE COUNTERGRAFTS PLASTY IN RECONSTRUCTIVE REPARATIVE SURGERY OF
BURNS (360 OPERATIONS IN 225 PATIENTS) IN ANALYSED. INDICATIONS TO THE
USE OF THIS METHOD ARE GIVEN IN DETAIL.

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UNCLASSIFIED

USSR

UDC: 621.397:535.67

KRIVOSHEYEV, M. I., DVORKOVICH, V. P., KRYLOV, L. N.

"A Device for Automatically Measuring Linear Distortions of the Characteristics of Color Television Channels"

USSR Author's Certificate No 269225, filed 25 Jul 68, published 12 Aug 70 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6G125 P)

Translation: This Author's Certificate introduces a device for automatically measuring linear distortions of the characteristics of color television channels. The device contains an amplifier with automatic peak-to-peak gain control of the brightness signal. This amplifier is connected through a low-frequency filter and delay line to one of the inputs of a subtractor, and through a high-frequency filter and color signal envelope detector to the second input of the subtractor. The device also contains a digital registration device which consists of a digital display, a digital printout device, a sign indicator with peak detector, and an analog-digital converter. To improve accuracy of measurements of the difference in gain and divergence in time of brightness and chrominance signals, a second subtractor is connected to the output of the first subtractor through

1/2

- 157 -

KRIVOSHEYEV, M. I. et al., USSR Author's Certificate No 269225

commutated peak detectors. The signal from this second subtractor is sent to the above-mentioned sign indicator, and the outputs of the commutated peak detectors are simultaneously connected to the input of an adder whose output is connected through an arcsine amplifier to the input of the analog-digital converter of the digital registration device. As a distinguishing feature of the patent, the total amplitudes of signals at the outputs of the lower and upper frequency filters are balanced out by connecting an amplifier with automatic gain control by the voltage from the output of the second subtractor between the chrominance signal envelope detector and the subtractor input. V. M.

Probability & Statistics

USSR

UDC: 519.2

KRYLOV, N. V.

"Separation of a Markov Process From a Markov System of Processes and the Development of Quasi-Diffusion Processes"

Moscow, Izvestiya Akademii Nauk SSSR--Seriya Matematicheskaya, No 3, 1973, pp 691-708

Abstract: The separation of a Markov process from a Markov system of processes is interesting because of two interconnected problems. The first of these assumes a process x_t , varying randomly with time with the action of $x_t = x_t[u]$, where u is the function $\{u\}$ whose value at the moment t depends only on the trajectory $x_s^0 = \{x_s, s \leq t\}$. It is assumed that x_t depends on u such that, if the control of u at the moment $t \in [s, r]$ is a function only of x_s^0 , then $x_t[u]$ is independent of x_s^0 for a known x_s and $t \in [s, r]$. The further assumptions are made that a criterion for the quality of the control is given, that there exist controls which are optimal in accordance with that criterion, and that if $\{u^1(x_t^0)\}$, $\{u^2(x_t^0)\}$ are optimal, then the control $u(x_t^0) = u^1(x_t^0)$

1/2

USSR

KRYLOV, N. V., Izvestiya Akademii Nauk SSSR--Seriya Matematicheskaya, No 3, 1973, pp 691-708

for $t \leq s$, and $u(x_t^0) = u^1(x_t^0)$ for $t > s$, with any s . The question then is whether there exist controls for which $x_t [u]$ is a Markov process. The second of the two problems mentioned involves control of a solution for the stochastic equation $dx_t = \sigma(x_t, u_t) d\xi_t$, where ξ_t is a Wiener process in d -dimensional Euclidean space. Here, it is assumed that the optimal control is the Markov control $u_t = f(x_t)$, where f is a known function. The question to be answered is then whether this last equation can be solved by a Markov process. Both these problems are successfully resolved.

2/2

USSR

UIC: 519.2

KRYLOV, N. V.

"On Controlling the Solution of a Stochastic Integral Equation With Degeneration"

Moscow, Izvestiya Akademii Nauk SSSR: Seriya Matematicheskaya, Vol 36, No 1, Jan/Feb 72, pp 248-261

Abstract: The article is a continuation of the author's work "On Controlling the Solution of a Stochastic Integral Equation", Teoriya veroyatn. i yeye primeneniya, Vol. 17, No. 1, 1972. The principal result of the previous paper contained in Theorem 3 is that the function of advantage satisfies a Bellman nonlinear differential equation if the processes to be controlled do not degenerate and the coefficients of the stochastic equation are bounded. In this paper, as in the first part of the work, the author considers the case where all coefficients of the stochastic equation depend on the controlling parameter. However, the restrictions concerning nondegeneracy and boundedness are disregarded. It is shown that the function of advantage under the given assumptions always satisfies a "normalized" Bellman's equation, whereas the ordinary Bellman's equation may not even have a solution. Strictly speaking, the requirement for nondegeneracy could not be completely eliminated. Nevertheless, it is assumed that among the permissible controls there is one which does

1/2

USSR

KRYLOV, N. V., *Izvestiya Akademii Nauk SSSR: Seriya Matematicheskaya*, Vol. 36, No 1, Jan/Feb 72, pp 248-261

not lead to degeneration of the controlled process. The paper consists of four sections. In the first, the basic notation and assumptions are introduced; the second section is devoted to formulation of three theorems and a demonstration of how they can be derived from two lemmas. The proof of these two lemmas is given in the third section, and section 4 gives two examples of application of theorem 1. The author thanks L. I. Gal'chuk for constructive criticism of sections 2 and 4. Bibliography of eight titles.

2/2

- 30 -

1/2 011 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--DEHYDRATION AND DESALTING OF PETROLEUM EMULSIONS -U-
AUTHOR--(05)-BULSHEV, S.F., BASHENOV, YU.M., KRYLOV, D.A., BASHMAKOV, P.V.,
DONCHENKO, N.A.
COUNTRY OF INFO--USSR
SOURCE--U.S.S.R. 263,794
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRATZSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--10FEB70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CHEMICAL PATENT, SURFACTANT, PETROLEUM EMULSION, PETROLEUM
DESALTING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3005/0387

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0132977

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--13NOV70

2/2 011

CIRC ACCESSION NO--AA0132977

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PETROLEUM EMULSIONS ARE DESALTED AND DEHYDRATED, REDUCING CORROSION OF PETROLEUM EQUIPMENT, BY INTRODUCING POLYETHYLENIMINE AS A SURFACTANT.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--CATALYTIC SYNTHESIS OF CARBOHYDRATES FROM FORMALDEHYDE -U-
AUTHOR--(04)-KRYLOV, O.V., SINYAK, YU.YE., USPENSKAYA, V.A., SHULGINA, I.L.
COUNTRY OF INFO--USSR
SOURCE--KOSMICHESKAYA BIOLOGIYA I MEDITSINA, VOL. 4, JAN, FEB. 1970, P.
6-11
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CARBOHYDRATE, CHEMICAL SYNTHESIS, FORMALDEHYDE, CATALYTIC
ORGANIC SYNTHESIS, CHROMATOGRAPHY, CALCIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/0067

STEP NO--UR/0453/70/004/000/0006/0011

CIRC ACCESSION NO--AP0119063

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0119063

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE EFFECTS OF THE TEMPERATURE, SOLVENT, AND FORMALDEHYDE AND CATALYST CONCENTRATION ON THE YIELD AND COMPOSITION OF MONOSACCHARIDES PRODUCED BY FORMALDEHYDE CONDENSATION. THE EXISTENCE OF A DIRECT RELATION BETWEEN THE RATES OF THIS REACTION AND THE CONCENTRATIONS OF FORMALDEHYDE AND CATALYST COULD NOT BE ESTABLISHED. A HIGHER YIELD OF MONOSACCHARIDES WAS OBTAINED IN AN ALCOHOL MEDIUM. CHROMATOGRAPHY INDICATES THAT MOST OF THE PRODUCTS ARE ALDOPENTOSEs AND ALDOHEXOSEs. THE EQUATION OF AUTOCATALYSIS DESCRIBES SATISFACTORILY THE KINETICS OF THIS REACTION. THE ACTIVATION ENERGY OF THE REACTION IN THE PRESENCE OF CALCIUM HYDROXIDE IS 11.3 KCAL/MOL.

UNCLASSIFIED

KRYLOV, O. V.

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SO: JPRS 53388

17 JUN 71

UNC 547.281.1:547.455:546.65-36

EFFECT OF RARE-EARTH HYDROXIDES ON THE REACTION OF

FORMALDEHYDE CONDENSATION INTO SUGARS

1971 (Soviet Union)

64-11557

[Article by A. A. Nerlin, O. V. Krylov, and Ya. Ya. Sivak; Moscow, Khimicheskaya Biologiya i Meditsina, Vol. 5, No. 1, 1971, pp 33-36, submitted for publication 9 March 1970]

Abstract: This paper gives a review of the literature on catalysts of the reaction of formaldehyde condensation into sugars. Taking into account that every catalyst of this reaction has an ion radius, it is suggested that new catalysts should be sought among reagents whose ion radius corresponds to the required conditions. Several catalysts based on lanthanides are considered suitable. It was found that at 110°C thallium, dysprosium, erbium, europium, samarium, cerium and scandium hydroxides accelerate the formation of carbohydrates.

The production of carbohydrates is one of the most important links in a system for introducing foods for man during future space flights. Most of the systems for the physicochemical synthesis of carbohydrates are based on the formaldehyde condensation reaction. A. M. Butlerov (1861) was the first to demonstrate the functional possibility of synthesizing carbohydrates from C_6H_6 using $\text{Ce}(\text{OH})_3$, K_2CO_3 , and Na_2CO_3 as catalysts.

It has been assumed that simultaneously with the C6H6 condensation reaction there is a hydration process, that is, the formation of formaldehyde and other alcohols. The rate of these processes is dependent on the alkalinity of the catalyst. With an increase in the latter (NaOH, KOH) the hydration process is accelerated; at the same time, the weak alkalinity of $\text{Ce}(\text{OH})_3$ favors the condensation process. The condensation reaction is accelerated twice as rapidly when a mixture of 5% sodium chlorate is added to the reaction mixture; on the other hand, potassium nitrate and sodium acetate slow down this process.

chemistry

USSR

UDC: 681.325.3

IVANDIKOV, V. V., KRYLOV, S. N., SHAFRANSKIY, L. V.

"Analog Voltage-to-Digital Converter"

USSR Author's Certificate No 251263, Filed 20 Dec 67, Published 4 Feb 70
(from RZh-Avtomatika, Telemekhanika i vychislitel'naya tekhnika, No 9, Sep
70, Abstract No 9B556P)

Translation: An analog voltage-to-digital converter contains null mechanisms the inputs of which are connected to a converted signal source and to a standard voltage divider. It also contains a code converter. The analog-to-digital converter differs from the known ones by the fact that in order to increase speed and accuracy of conversion, in each bit except the high-order bit the outputs of the null mechanisms are connected via a logical "negation of equivalence" circuit to the corresponding inputs of the code converter. The output of the null mechanism of the high-order bit is connected to the input of the code converter directly, and the outputs of the code converter, except the outputs of the low-order bits, are connected to the standard voltage divider. There is one illustration.

1/1

SSR

UDC 615.217.34.015.42:612.82.015.348

YELAYEV, N. R., IVANOVA, A. I., and KRYLOV, S. S., Institute of Toxicology, Leningrad

"Time Parameters of the Activation of the Synthesis of Protein and RNA in the Brain Under the Action of the Atropine-Like Substance Amisyl"

Moscow, Doklady Akademii Nauk SSSR, Vol 213, No 5, 1973, pp 1201-1202

Abstract: It has been shown in earlier work by the authors that the central M-cholinolytic amisyl (N-diethylaminoethyl ester of diphenylglycolic acid), on being administered in doses that inhibit conditioned reflexes, activates the synthesis of protein and of RNA in the brain of rats. The synthesis of membrane proteins is induced predominantly under the conditions in question. The incorporation of 2-¹⁴C-uridine and 1-¹⁴C-glycine into newly synthesized RNA and proteins of the brain, respectively, upon a single intraperitoneal administration to rats of amisyl in a dose of 4 mg/100 g in the work conducted in this instance indicated that the synthesis of proteins initially lagged behind that of RNA; that the maximum synthesis of both was reached 2 hrs after the administration the effect of the drug in stimulating the synthesis of RNA and proteins had completely disappeared. After a single administration of amisyl, the content of proteins synthesized under the

1/2

USSR

YELAYEV, N. R., et al., Doklady Akademii Nauk SSSR, Vol 213, No 5, 1973,
pp 1201-1202

effect of this drug, as indicated by the tracer radioactivity, reached zero on the 96th hour after administration; hence, the half-life of the newly synthesized proteins was much shorter than that of brain proteins in general, which amounts to several tens of days. In experiments in which amisyl and ^{14}C -glycine were administered daily for 13 days, the content of radioactive proteins remained at the initial level reached on the first day. Apparently no tolerance to the cholinolytic developed, so that its action must lead to the formation of an excess amount of newly synthesized proteins. One may conclude that the cholinolytic inhibits (presumably indirectly) the mechanism suppressing the synthesis of some class of nerve cell proteins.

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USSR.

UDC 612.822.3+612.821.2

KRYLOV, S. S., VINOGRADOV, V. V., and KAL'NING, S. A., Leningrad

"On the Relationship Between an Electroencephalogram and Various Types of Memory Under the Influence of Amizil"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlova, Vol 21, Vyp 6, Nov/Dec 71, pp 1,223-1,229

Abstract: Two-, three-, and five-milligram doses of amizil were administered intramuscularly to a group of dogs and cats. Within 5-10 minutes after the injection of the drug, which is known to block the brain's cholinoreceptors, the EEG's of all the animals exhibited slow, high-amplitude waves, similar to those that occur during natural sleep. These amizil-induced changes were accompanied by loss of short-term image memory and loss of prolonged retention of current information and consequent inability to learn. The animals regained their short-term memory within 5-6 hours, at the same time that the blockade of the cholinoreceptors ceased, and the EEG's returned to normal. Simple, stable conditioned reflexes, involving long-term memory, were disrupted for only about 4 hours, although the more complex alimentary motor type were disrupted for 24-48 hours. These disturbances were caused by the indirect interference of amizil in the metabolism of biogenic amines, particularly catecholamines.

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- 70 -

USSR

KRYLOV, S. S., et al., Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlova, Vol 21, Vyp 6, Nov/Dec 71, pp 1,223-1,229

A frequency analysis of the EEG's showed an increase in slow waves in all parts of the brain, and an increase in alpha- and beta-waves in the reticular formation of the midbrain.

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1/2 027 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--N-CHOLINOREACTIVE STRUCTURES OF THE BRAIN AND CONDITIONED ACTIVITY
-U-
AUTHOR--(04)-KRYLOV, S.S., VINOGRADOV, V.V., KALNING, S.A., SNEGIREV, YE.A.
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL VYSSHEY NERVNOY DEYATEL'NOSTI, 1970, VOL 20, NR 3, PP
541-546
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CONDITIONED REFLEX, NERVOUS SYSTEM DRUG,
ELECTROENCEPHALOGRAPHY, CHOLINOLYTIC, NOREPINEPHRINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/1924

STEP NO--UR/0247/70/020/003/0541/0546

CIRC ACCESSION NO--AP0120573

UNCLASSIFIED

2/2 027

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120573

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. A SINGLE ADMINISTRATION OF AMYZIL (5 AND 40 MG-KG) PREVENTED ARECOLYNE TREMOUR IN RATS AND ARECOLYNE AND GALANTHINE EEG DESYNCHRONIZATION IN CATS, AND EVOKED UNMOTIVATED MOTOR EXCITATION, A COMPLETE DISAPPEARANCE OF CONDITIONED REFLEXES AND A DIMINISHED NORADRENALINE CONTENT IN THE RATS BRAIN. WITH REPEATED DAILY INJECTIONS OF CHOLINOLYTICS, THE MOTOR EXCITATION, DISTURBANCES OF CONDITIONED REFLEXES AND THE DECREASE IN NORADRENALINE LEVEL IN THE BRAIN GRADUALLY WEAKENED, AND WERE NOT MANIFEST AT ALL ON THE 9TH TO 10TH DAY, ALTHOUGH EACH SUCCESSIVE AMYZIL INJECTION EXERTED THE USUAL ACTION OF THE CATS' EEG AND COMPLETELY PREVENTED DESYNCHRONIZATION REACTION IN CATS AND TREMOUR IN RATS. AT THE SAME TIME, IN THE CASE OF A FULL BLOCKADE OF THE M-CHOLINORECEPTORS OF THE BRAIN NEW CONDITIONED REFLEXES COULD NOT BE ELABORATED. THE DATA OBTAINED SHOW THAT THE ACETYLCHOLINE TRANSMITTER SYSTEM IN THE BRAIN UNITS IS OF A CONSIDERABLE SIGNIFICANCE FOR MEMORY FORMATION, BUT IS NOT NECESSARY FOR THE PERFORMANCE OF CONDITIONED REACTIONS ALREADY FORMED. FACILITY: INSTITUTE OF TOXICOLOGY, USSR MINISTRY OF HEALTH, LENINGRAD.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--02 OCT 70
TITLE--ON GENTLY SLOPING SEISMIC BOUNDARIES WITHIN THE BASINMENT -U-

AUTHOR--KRYLOV, S.V.

COUNTRY OF INFO--USSR *R*

SOURCE--GEOLOGIYA I GEOFIZIKA, 1970, NR 4, PP 98-110

DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--EARTH CRUST, SEISMIC SOUNDING, SEISMIC VELOCITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REFL/FRAME--1994/0053

STEP NO--UR/0210/70/000/004/0046/0110

CIRC ACCESSION NO--AP0114449

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--02 OCT 70

CIRC ACCESSION NO--AP0114449

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SOME PECULIARITIES OF SEISMIC METHOD WHICH ARE OF SIGNIFICANCE FOR ESTIMATION OF SIMPLE GENTLE FORM OF DISCONTINUITY BOUNDARIES DISTINGUISHED WITHIN THE EARTH'S CRUST AT DEEP SEISMIC SOUNDING ARE CONSIDERED IN THE PAPER. AN EFFECT OF COMPRESSION IS DISCUSSED (VELOCITY INCREASED IN THE ROCKS CAUSED BY THE PRESSURE OF OVERLIED TERRANES WITH ESTIMATION OF TEMPERATURE INCREASE). THE EFFECTS OF FLATTENING OF COMPLICATED STRUCTURAL FORMS BY SEISMIC CONSTRUCTIONS BASED UPON THE DATA OF REFLECTED AND REFRACTED WAVES ARE ALSO CONSIDERED. THE MAIN ATTENTION IS PAID TO CONDITIONS OF THE UPPER PART OF CRYSTALLINE CRUST SECTION. THE PAPER CONTAINS SOME EXAMPLES OF GEOLOGICAL EXPLANATION OF SEISMIC SECTION IN DIFFERENT AREAS OF THE USSR AND NORTH AMERICA.

FACILITY: IGIG SO AN SSSR, NOVOSIBIRSK.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--THE FIRST RESULTS OF DEEP SEISMIC SOUNDING IN THE BAIKAL RIFT ZONE
-U-
AUTHOR--~~KRYLOV, S.V.~~, MISHENKIN, B.P., KRUPSKAYA, G.V., PETRIK, G.V.,
YANUSHEVICH, T.A.
COUNTRY OF INFO--USSR
SOURCE--GEOLOGIYA I GEOFIZIKA 1970, NR 1 (121) PP 84-91
DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--SEISMIC SOUNDING, EARTH CRUST, SEISMIC WAVE, MOHROVICIC
DISCONTINUITY, ELASTIC WAVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1986/1290

STEP NO--UR/0210/10/000/001/0034/0091

CIRC ACCESSION NO--AP0103172

UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0103172

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FIRST RESULTS OF STUDY OF THE EARTH'S CRUST OF BAIKAL RIFT ZONE AND SOUTHERN END OF THE SIBERIAN PLATFORM, CARRIED OUT BY THE PUNCTATE SOUNDING METHOD USING THE WAVES OF DIFFERENT TYPES ARE LISTED IN THE PAPER. THE CHANGES OF SEISMIC DISCONTINUITIES RELIEF, INCLUDING THE MOHO AND ALSO ELASTIC WAVES VELOCITIES ALONG THE ROUTE OF STUDY ARE REPRESENTED IN THE SUMMARY SECTION OF THE EARTH'S CRUST. IT IS ESTABLISHED THAT THE MOHO DISCONTINUITY IN BAIKAL RIFT ZONE IS CHARACTERIZED BY DECREASED VALUES OF ELASTIC WAVES VELOCITIES. "THE ROOT" AND "ANTIROOT" ARE ABSENT IN THE RELIEF OF THE EARTH'S CRUST BASEMENT.

UNCLASSIFIED

USSR

UDC: 539.1.074

DMITRIYEV, A. K., KON'KOV, N. G., KRYLOV, S. Yu.

"Adiabatic Differential Calorimeter for Measurement of Absorbed Dose of Powerful Beams of Accelerated Electrons"

Dozimetriya i Radiats. Protsessy v Dozimetr. Sistemakh [Dosimetry and Radiation Processes in Dosimetric Systems -- Collection of Works], Tashkent, Fan Press, 1972, pp 59-62 (Translated from Referativnyy Zhurnal Metrologiya i Izmeritel'naya Tekhnika, No 3, 1975, Abstract No 3.52.1388), from the resume.

Translation: The design of a calorimeter intended for measurement of local absorbed doses in tissue-equivalent media produced by a beam of accelerated electrons at 1-10 MeV energy is described. The method of measurement of the absorbed dose is reduced to comparison of temperature changes in the absorber under the influence of the radiation to temperature changes caused in a control calorimeter by Joule heat. The calorimeter is suggested for use in calibration of film dosimeters in the 10-100 krad/s dose range. The calculated error in measurement of absorbed doses is 1%. 1 figure, 3 biblio. refs.

1/1

USSR

UDC: 539.1.074

DMITRIYEV, A. K., ~~KON'KOV, N. G.~~, KRYLOV, S. Yu.

"Adiabatic Differential Calorimeter for Measurement of Absorbed Dose of Powerful Beams of Accelerated Electrons"

Dozimetriya i Radiats. Protsessy v Dozimetr. Sistemakh [Dosimetry and Radiation Processes in Dosimetric Systems -- Collection of Works], Tashkent, Fan Press, 1972, pp 59-62 (Translated from Referativnyy Zhurnal Metrologiya i Izmeritel'naya Tekhnika, No 3, 1973, Abstract No 3.32.1388), from the resume.

Translation: The design of a calorimeter intended for measurement of local absorbed doses in tissue-equivalent media produced by a beam of accelerated electrons at 1-10 MeV energy is described. The method of measurement of the absorbed dose is reduced to comparison of temperature changes in the absorber under the influence of the radiation to temperature changes caused in a control calorimeter by Joule heat. The calorimeter is suggested for use in calibration of film dosimeters in the 10-100 krad/s dose range. The calculated error in measurement of absorbed doses is 1%. 1 figure, 3 biblio. refs.

1/1

USSR

UDC 576.858.5:095.383

3

SELIVANOV, A. A., KOVALEVA, T. P., AKSENOV, O. A., YURLOVA, E. I., LYSOV, V. V.,
KRYLOV, V. A., and SMORODINTSEV, A. A., All-Union Scientific Research Institute
of Influenza, Ministry of Health USSR, Leningrad

"Anti-Interference Effect of Adenoviruses"

Moscow, Voprosy Virusologii, No 5, Sep/Oct '72, pp 574-577

Abstract: Crude adenoviruses, serotype 1, 4, and 7 adenoviruses heated to 56°C for 30 min, and purified pentone antigen of serotype 4 suppress induction of interferon by influenza A2 Hong Kong Virus and inhibit interference between influenza A2 virus and vesicular stomatitis virus in chick embryo fibroblasts. Adenoviruses treated with trypsin, fibrantigen, and hexone-antigen no longer have this capacity. There is a good direct correlation between the cytotoxic, anti-interference, and anti-interferon-inducing capacities of the above-mentioned strains of adenoviruses. None of these strains stimulates reproduction of vesicular stomatitis virus. It is postulated that anti-interference is due not only to inhibition of interferon production but also to reduction of the activity of previously produced interferon.

1/1

- 29 -

KRYLOV, V. A.

ELECTROMAGNETIC RADIATION SAFETY

JPRS 58763
10 April 1970

Complete translation of the Russian-language book by V. A. Krylov and V. V. Yermolenko, Bezopasnost' ot elektromagnitnykh izlucheniyei, 1972, Moscow, 112 to Sovetskoye Radio.

CONTENTS

PREFACE.....	1
ABBREVIATION.....	2
INTRODUCTION.....	3
CHAPTER 1: Radio Frequency Electromagnetic Radiation.....	5
CHAPTER 2: Laser Emissions.....	11
CHAPTER 3: X-Radiation of Electronic Instruments.....	12
CHAPTER 4: Treatment and Prevention.....	15
CHAPTER 5: Physiological and Economic Aspects of RFR and LRF Electromagnetic Radiation Safety.....	16
BIBLIOGRAPHY.....	18

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[1 - USSR - 2]

USSR

UDC 621.311.1.012.5.001.24:681.3

KRYLOV, V. A., LEGKIY, V. A., ROMANENKO, N. P., STEPANCHIKOVA, S. A.

"All-Purpose Automated Program for Digital Computer Calculations of the Short-Circuit Current by the Iteration Method of Nodal Voltages"

V sb. Probl. tekhn. elektrodinamiki (Problems of Technical Electrodynamics -- collection of works), vyp. 25, Kiev, Naukova Dumka Press, 1970, pp 40-44 (from RZh-Eletrotekhnika i Energetika, No 4, Apr 71, Abstract No 4 Ye255)

Translation: An algorithm and programs for calculating all types of short-circuits on the Ural-2 digital computer with automatic alternation of versions are described. The short circuit currents are calculated at each given point by the iteration method of nodal voltages. The results of the studies of convergence of the iteration process are presented. The bibliography has 5 entries. [Institute of Electrodynamics of the Ukrainian SSR Academy of Sciences]

1/1

USSR

UDC 621.316.1.012.5:681.3

KRYLOV, V. A.

"Calculation of Short-Circuit Currents on a Digital Computer by the Direct Method of Nodal Voltages by Means of Separation of the System into Subsystems"

V sb. Probl. tekhn. elektrodinamiki (Problems of Technical Electrodynamics -- collection of works), vyp. 25, Kiev, Naukova Dumka Press, 1970, pp 34-40
(from RZh-Elektrotehnika i Energetika, No 4, Apr 71, Abstract No 4 Ye256)

Translation: A procedure is discussed for using a digital computer to calculate the initial nodal parameters (resistances and preemergency voltages) of a complex electric power network required for subsequent automatic calculation of the short circuit currents. When finding the indicated parameters and during further calculations, the elements of algorithms developed for calculating short circuit currents in systems with a smaller number of nodes are used. The bibliography has 8 entries. [Institute of Electrodynamics of the Ukrainian SSR Academy of Sciences]

1/1

- 122 -

1

USSR

UDC 621.762:669.018.5(088.8)

SAMSONOV, G. V., DUBOVIK, T. V., KUTSENOK, T. G., KRYLOV, V. D., TICHONOVA, V. F.

"Cermet Material"

USSR Author's Certificate No 309967, filed 24 Mar 70, published 29 Sep 71 (from RZh--Metallurgiya, No 4, Apr 72, Abstract No 4G420P)

Translation: A cermet material based on Al nitride is proposed for the manufacture of ignitron igniters of welding machines and converters. In order to decrease the ignition power and stabilize the electric parameters, 35-70% TiC is introduced into the material.

1/1

- 52 -

Epidemiology

USSR

UDC 616.988.75-06:616.988.5]-053.3-036

ALEKSEYEVA, A. A., KETILADZE, Ye. S., KNYAZEVA, I. D., KRYLOV, V. F., GRUSHINSKAYA, I. A., ZHILINA, N. N., and STAKHANOVA, V. M., Clinical Department, Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR on the base of Clinical Infectious Disease Hospital No 82, Moscow

"The Course of Mixed Influenza-Adenoviral Infection in Adults"

Moscow, Klinicheskaya Meditsina, No 1, 1973, pp 101-105

Abstract: Of 1055 patients, age 16 to 78 admitted to the authors' hospital with respiratory symptoms during the 1969 and 1970 influenza A2-Hongkong epidemics, 158 (15%) were diagnosed after physical examination and laboratory tests as having a mixed influenza-adenoviral infection. About one-third of these had the clinical symptoms of adenoviral infection (toxicosis, headache, head cold, pain in the throat, cough, pharyngitis) along with the usual symptoms of influenza. In the other two-thirds, the disease proceeded asymptotically in the form of a virus carrier state or subclinically. The average duration of the above symptoms was much longer than in those suffering from influenza or adenoviral infection alone; pharyngitis persisted the longest. Systematic follow-up (2 years) of the patients with chronic adenoviral infection exacerbated by influenza confirmed the continued presence of adenoviruses even though the individuals felt well and exhibited no signs of inflammation of the respiratory tract.

1/1

UDC 616.988.75(A2)

USSR

KETILADZE, YE. S., KNYAZEVA, L. D., KRYLOV, V. F., ALEKSEYEVA, A. A.,
POLYAKOVA, T. G., TSAREVA, R. G., LITVIN, L. L., and SKUL'ZHENKO, T. V.,
Clinical Department, Institute of Virology imeni D. I. Ivanovskiy, Academy
of Medical Sciences, USSR; and Municipal Infectious Disease Hospital No 82

"Clinical Picture and Some Aspects of the Pathogenesis of Influenza Caused
by Virus A2 (Hong-Kong)"

Moscow, Sovetskaya Meditsina, No 7, 71, pp 115-120

Abstract: The article reports findings of a study of 402 influenza patients
between 17 and 84 years of age, observed during the Moscow influenza epidemic
of January and February 1969. The subjects included both those observed in
the clinic and others in military units. The disease showed all the classical
traits of influenza infection: acute beginning; rapid rise in temperature
(39°C and higher in 88% of the civilian and 26% of the military cases); and
swiftly increasing signs of toxicosis. Almost all patients showed headache,
prostration, pains in the limbs, chill, dizziness, and vomiting. More severe
cases showed changes in the vascular and central nervous systems: delirium,
brief loss of consciousness, syncope, convulsions, and meningeal symptoms.
Cyanosis of the lips and oral mucous membranes, microscopic hemorrhages of the
1/2

USSR

KETILADZE, YE. S., et al., Sovetskaya Meditsina, No 7, 71, pp 115-120

soft palate, and nosebleeds were observed in relatively small percentages of cases. A table shows the relative frequency of various symptoms in successive influenza epidemics from 1959 through 1969. However, these figures show no consistent pattern. As is clear from the data presented, the clinical picture of A2 (Hong-Kong) influenza does not differ in the character of individual symptoms from the A2 influenza of previous years. However, in the degree of manifestation of toxicosis and the number of severe cases among patients hospitalized in the clinic, the influenza in 1969 was more severe than in 1967, but less so than in 1959. Patients in military units generally showed a less severe course. Older patients, especially those with chronic respiratory disorders, showed intensification of these conditions.

2/2

- 49 -

1/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--METHOD FOR OBTAINING
O,ALKYL,O,ACYL,BETA,DIALKOXYBORD,ETHYLTHIOPHOSPHONATES -U-
AUTHOR-(04)-STERLIN, R.N., ISAYEV, V.L., KRYLOV, V.F., BORISOVA, G.N.

COUNTRY OF INFO--USSR

SOURCE--AUTHOR CERTIFICATE NR 264393
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRATSY, TOVARNYE ZNAKI 1970, NR 9,
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHOSPHORUS SULFIDE, ORGANIC PHOSPHORUS COMPOUND, ORGANOBORON
COMPOUND, CHEMICAL SYNTHESIS, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3007/1771

STEP NO--08/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0137011

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AA0137011

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. A METHOD IS ANNOUNCED FOR OBTAINING N,ALKYL O,ACYL,BETA,(DIALKOXYBORO)ETHYLTHIOPHOSPHONATES BY REACTING ACYL HALIDES WITH ALKALI SALTS OF O,ALKYL,BETA,(DIALKOXYBORO)ETHYLTHIOPHOSPHONIC ACID IN AN ORGANIC SOLVENT. THE PROCESS IS CONDUCTED AT 60-80 C AND PRODUCTS ARE SEPARATED BY KNOWN METHODS.

UNCLASSIFIED

AA0044786

Krylov, U.S.
UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent, 1/70

243909 FORCE INTO PRESSURE CONVERTING DEVICE, in which air flows through the pipe (1) and throttle (2) into the measurement chamber (3), and if no load is applied to the diaphragm (6) rigid centre, the air from the measurement chamber is drained into atmosphere through the nozzle (7). When a load G is applied to the diaphragm rigid centre (4), a pressure builds up in the hydraulic chamber (9) proportional to the applied load. This pressure generates on the diaphragm (5) a force directed downwards and proportional to its effective area. The diaphragm (5) rigid centre is rigidly connected with that of the diaphragm (4).

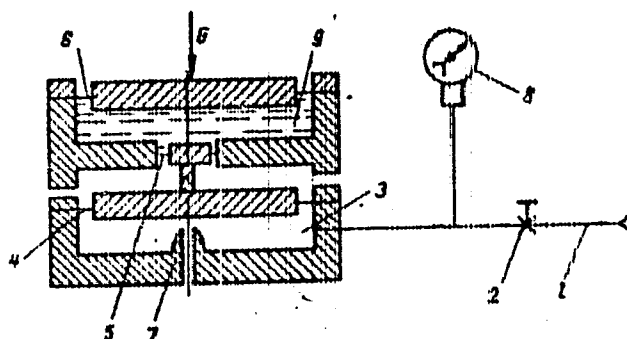
20.3.67 as 1141493/14-10. Add to 155977. KAPLANSKI, YU. E et alia. (26.9.69) Bul 17/14.5.69. Class 42k. Int. Cl. G 011.

1/2

21

19771601

AA0044786



243909 2/2 AUTHORS: Kaplanskiy, Yu. Ye.; Krylov, V. G. *MT*

19771602

UDC 669.71.042.6

USSR

PETRICHENKO, A. M., KRYLOV, V. I.

"Effect of the Thermal State of the Metal Die Pressure Cast Mold on Shrinkage and Dimensions of Castings from Aluminum Alloys"

Usadochn. protsessy v splavakh i otlivkakh -- V sb. (Shrinkage Processes in Alloys and Castings -- collection of works), Kiev, Naukova dumka Press, 1970, pp 304-306 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G184)

Translation: The thermal operation of a metal die pressure cast mold is described on the basis of research results. The optimal conditions are determined for it from the point of view of improving precision of the castings and insuring high output capacity of the pressure casting machines. There are 2 illustrations.

1/1

USSR

Reliability Theory

UDC: 621.396.6.019.3

KRYLOV, V. M.

"Application of Markov Model Theory to Analyzing the Quality of Radioelectronic Equipment Operation"

Tr. Mosk. in-ta inzh. zh.-d. transp. (Transactions of the Moscow Institute of Railroad Transport Engineers) 1970, No. 367, pp 307-312 (RZh-Radiotekhnika, No. 5, March 71, Abstract No. 34155)

Translation: A survey is given of the materials on the application of Markov processes in the construction of mathematical models used to analyze the operation of electronic devices. Bibliography of five. Resume

1/1

USSR

UDC: 621.73.042

GENERSON, I. G., KHINSKIY, P. D., TOKAREV, V. N., LIBMAN, P. M., KRYLOV, V. N.

"New Technology for Production of Forgings of Large Turbine Wheels"

Kuznechno-Shtampovochnoye Proizvodstvo, No 1, Jan 73, pp 3-7.

Abstract: The Neva Machine Building Plant imeni V. I. Lenin has developed a new technology for the production of forgings of large turbine discs, assuring high metal quality. The technological features of the new process are as follows: 1. The discs are made of steel melted in an arc electric furnace by the method of deep decarburization. 2. During pouring of the steel into ingots of relatively small size, designed to yield one disc per ingot, the steel is evacuated. 3. An increased volume of metal is removed from the axial zone of the ingot. The primary stages of experimental work in production of turbine discs by the new technological process and results of their examination are presented.

1/1

- 81 -

USSR

UDC: 621.378.345.4

VOLOSOV, V. D., DUKHOVNYI, A. M., KRYLOV, V. N., SOKOLOVA, T. V.

"On Converting Radiation From a Laser in the Free Emission Mode to the Second Harmonic"

Moscow, Kvantovaya Elektronika, Sbornik Statey, No 2(8), 1972, pp 101-102

Abstract: An investigation was made into the energy dependence of the coefficient of conversion of radiation from a neodymium laser operating in the free emission mode to the second harmonic. When beam divergence is 20° and energy density is 75 J/cm^2 , a coefficient of conversion of 0.105% is obtained. The destruction threshold for a KDP crystal was 1100 J/cm^2 . Three illustrations, bibliography of two titles.

1/1

- 15 -

USSR

UDC 615.919:591.145.2.615.918:58.615.9:576.8.097.29

ORLOV, B. N. and KRYLOV, V. N.

"A Disruption of the Heart Activity of Warm-Blooded Animals During Cobra Venom Poisoning"

Uch. zap. Gor'kov. un-t. Ser. biol. (Educational Proceedings of the Gor'kov University, Biological Series), Vyp 40, 1972, pp 44-51 (from Referativnyy Zhurnal -- Farmakologiya. Khimioterapevticheskiye Sredstva. Toksikologiya, No 1, 1973, Abstract No 1.54.780 by V. K.)

Translation: A bradycardia and a depression of the auricle complex of the EKG were observed for rabbits into which 0.25-1 mg/kg of venom (I) from the Central Asian cobra had been injected. The injection of I into vagotomized animals did not lead to a reduction in the rhythm, although a change in the EKG showed this effect. (21 references)

1/1

USSR

UDC 621.375.82

VOLOSOV, V. D., DUKHOVNYI, A. M., KRYLOV, V. N., and SOKOLOVA, T. V.

"On the Transformation of Laser Radiation in a Free Oscillation Mode to the Second Harmonic"

V sb. Kvant. elektronika (Quantum Electronics -- Collection of Works), No 2, Moscow, "Sov. radio," 1972, pp 101-102 (from RZh-Fizika, No 10, Oct 72, Abstract No 10D871)

Translation: The energy dependence of the transformation coefficient of the radiation of a Nd laser operating in a free oscillation mode was investigated. A transformation coefficient of 0.105% was obtained for a divergence of 20" and an energy density of 75 joule/cm². An energy density of 1100 joule/cm² was the breakdown threshold of the KDP crystal. Authors abstract.

1/1

- 31 -

USSR

AGOL, V. I., ATABEKOV, I. G., KRYLOV, V. N., and TIKHONENKO, T. I., Molekularnaya Biologiya Virusov, (Molecular Biology of Viruses), Moscow, "Nauka," 1971, 493 pp

Annotation: This book is in the form of a monography devoted to molecular biology and the molecular genetics of viruses. It correlates contemporary achievements in the study of biochemistry and the ultrafine structure of viruses and discusses in detail the chemical composition of viruses, the chemistry of viral proteins and nucleic acids, as well as other constituents, including enzymes. A detailed examination is also made of the diverse and complex problem of the interaction of viruses and proteins. Special attention in the book is paid to the genetics of viruses.

The book is intended for scientific workers in various fields: virologists, biochemists, microbiologists, biologists, medical and veterinary workers and those employed in agriculture, as well as a guide for senior biology students in university departments and medical institutes.

CONTENTS

Preface

1. TIKHONENKO, T. U., The biochemistry of viruses and their components 11
2. ATABEKOV, I. G., The structure of viruses 99
3. AGOL, V. I., The interaction of viruses and proteins 189

1/4

USSR

AGOL, V. I., Molecular Biology of Viruses, Moscow, "Nauka," 1971, 493 pp

4. KRYLOV, V. N., Viral genetics

409

1. THE BIOCHEMISTRY OF VIRUSES AND THEIR COMPONENTS - TIKHONENKO, T. I.

General chemical composition	12
Viral proteins	17
The primary structure of viral proteins	17
The stability of protein capsules to proteases	25
Crude virus protein and autogenesis	30
Virus enzymes	34
Neuraminidase (Sialase) Myxoviruses	35
ATP-ase of viruses of myeloblastosis and of herpes	37
Lysozyme and lysins of phages	39
ATP-ase of phage particles	40
Nucleic acid of viruses	42
Primary structure	42
Nitrogen bases	42
Carbohydrate component	48
Secondary structure	57
Double helix DNA	57
Single strand RNA	61

2/4

- 87 -

USSR

AGOL, V. I., Molecular Biology of Viruses, Moscow, "Nauka," 1971, 493 pp

Single strand DNA	62
Double helix RNA	65
Ring (cyclic) structures	66
Covalent-bonded cyclic polynucleotides	66
Cyclic structures held by H-bonds	76
Biological functions of the cyclic form	81
Superspiralization of cyclic double-helix DNA	82
Molecular weight	86
Other components of virus particles	91
Lipids	93
Carbohydrates	94
Ions of metals and acid soluble compounds	94
Recommended literature	97
2. THE STRUCTURE OF VIRUSES - ATABEKOV, I. G.	
Introduction	100
General principles of virus structure	101
Viruses with a spiral structure	107
Certain characteristics of viruses with a rigid spiral structure	107
Specifics of spiral symmetry and structure of tobacco mosaic virus	111

3/4

USSR:

AGOL, V. I., Molecular Biology of Viruses, Moscow, "Nauka," 1971, 493 pp

Disintegration of virus particles	113
The repolymerization of virus protein	122
Immunochemical study of polymerization of virus protein	133
Thread-like viruses	136
Spherical viruses	137
Principles of symmetry of spherical viruses	137
Partial data about the structure of certain spherical viruses	146
The interaction of nucleic acid with virus protein during the reconstruction of viruses	155
Complex viruses	163
Bibliography	182
32. THE INTERACTION OF VIRUS AND CELL - AGOL, V. I.,	
Introduction	190
General nature of the productive infectious process	191
Penetration of viruses into the cell	199
Synthesis of DNA viruses	218
Synthesis of RNA viruses	248
Synthesis of virus proteins	264
Synthesis of other virus components	288
The formation of mature virus particles and their discharge from the cell	289

3/4

- 83 -

USSR

AGOL, V. I., Molecular Biology of Viruses, Moscow, "Nauka," 1971, 493 pp

Synthesis of viruses and their components in a cell-free system	304
Reaction of the cell to a virus infection	312
Virogenesis and moderate viruses	331
Interaction between viruses	360
Modification of the infectious process. Inhibitors and environmental conditions	372
Modification of the infectious process. The role of the host cell	380
Modification of the infectious process. Virus mutants	388
General conclusion. The nature of viruses	395
Bibliography	400
4. THE GENETICS OF VIRUSES - KRYLOV, V. N.	
Introduction	410
The molecular mechanisms of mutation	413
Selection of mutations for genetic analysis	417
Suppression	424
Molecular nature of dominance	430
Recombination of viruses	433
The fine structure of the gene	484
Concerning the genetic homology of closely related viruses	489
Conclusion	490
Bibliography	491

4/4

1/2 027 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--NATURE OF THE DESTABILIZATION OF ZR SUB1 MINUS X CA SUBX U SUB2
MINUS X SOLID SOLUTIONS DURING REACTION WITH BORON OXIDE -U-
AUTHOR-(04)-FILATOV, S.K., FRANKKAMENETSKIY, V.A., ZHURAVINA, T.A.,
KRYLOV, V.N.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(1), 166-7
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, PHYSICS
TOPIC TAGS--SOLID SOLUTION, CRYSTAL LATTICE STRUCTURE, ZIRCONIUM, CALCIUM
OXIDE, CHEMICAL REDUCTION, BORON
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1984/0082 STEP NO--UR/0363/70/006/001/0166/0167
CIRC ACCESSION NO--AP0054879

UNCLASSIFIED

2/2 027

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0054879

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE UNIT CELL PARAMETERS OF THE STABILIZED CUBIC LATTICE OF $Zr_{1-x}Ca_x$ SUBSTITUTED ZrO_2 SOLID SOLNS. IN THE PRESENCE OF B_{2O_3} AND OF THE MONOCLINIC PHASE FORMING DURING DESTABILIZATION WERE MEASURED. SAMPLES WITHOUT ANY B_{2O_3} PRESENT ARE REPRESENTED ONLY AS THE CUBIC PHASE WITH THE PARAMETER a BEING CONST. FOR ALL FIRING TEMPS. IN SAMPLES CONTG. 0.3 MOLE PERCENT CaO AND IN SAMPLES CONTG. B_{2O_3} AND ANNEALED AT 600 AND 800 DEGREES, THE PARAMETER OF THE CUBIC PHASE IS CONST. WITHIN THE SAME LIMITS. AFTER FIRING AT 1000 AND 1200 DEGREES, THE SAMPLES ARE A MIXT. OF THE CUBIC AND MONOCLINIC PHASES, WHICH PREVENTS AN ACCURATE DETN. OF LATTICE PARAMETERS. THE a PARAMETER OF THE CUBIC PHASE REMAINS CONST. WITHIN THE EXPTL. ERROR OF PLUS OR MINUS 0.002 ANGSTROM, WHICH CORRESPONDS TO CONST. CHEM. COMPN. OF PLUS OR MINUS 2 MOLE PERCENT CaO . THE LATTICE PARAMETERS OF THE MONOCLINIC PHASE ARE CONST. IN ALL CASES WITHIN EXPTL. ERROR AND ARE CLOSE TO THE PARAMETERS OF PURE ZrO_2 ; THE Ca CONTENT IS INSIGNIFICANT. DESTABILIZATION OF CUBIC $Zr_{1-x}Ca_x$ SUBSTITUTED ZrO_2 SOLID SOLNS. IS ASSOCD. WITH A LOSS OF Ca . THE MONOCLINIC PHASE FORMING DURING THE DESTABILIZATION IS PRACTICALLY PURE ZrO_2 AND THE Ca CONTENT IN THE REMAINING CUBIC PHASE REMAINS CONST. WITHIN THE LIMITS OF 12 PLUS OR MINUS 2 MOLE PERCENT CaO .

UNCLASSIFIED

1/2 008 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--PROPERTIES OF CADMIUM HEXAFLUOSILICATE SOLUTIONS STUDIED BY A
SALT CRYOSCOPIC METHOD -U-
AUTHOR-(02)-KRYLOV, V.N., KOMAROV, YE.V.
COUNTRY OF INFO--USSR
SOURCE--ZH. NEORG. KHIM. 1970, 15(3), 757-9
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--SILICATE, CADMIUM COMPOUND, EUTECTIC
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3001/0714 STEP NO--UR/0078/70/015/003/0757/0759
CIRC ACCESSION NO--AP0126426
UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0126426

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AQ. 0.02-0.15M CASIF SUB6 SOLNS.
IN 0.1-0.5M HNO SUB3 WERE STUDIED CRYOSCOPICALLY IN ICE-NH SUB4 CLQ SUB4
EUTECTIC. CASIF SUB6 HYDROLYZES TO CA PRIME2 POSITIVE AND SIF SUB6
PRIME2 NEGATIVE. THE INSOL. CAF SUB2 FORMS ONLY IN SOLNS. CONFG. EITHER
A LOW CONCN. OR NO HNO SUB3.

UNCLASSIFIED

USSR

UDC 615.849.19.03:616.6(047)

KRYLOV, V. S. and KAGAN, E. M.

"Lasers and the Outlook for Their Use in Urology"

Moscow, Urologiya i Nefrologiya, No 3, pp 62-66

Abstract: Following a discussion of the construction of lasers, their mechanism of action, effects on various tissues, and advantages over other instruments, the authors conclude from a review the literature, Soviet and foreign, on the use of lasers in various branches of medicine that they have proven themselves to date only in ophthalmology. Although lasers have been successfully used in the treatment of certain tumors, calculi and some other forms of genitourinary pathology, the prospects for their wider employment in urology are largely dependent on further improvement of both the apparatus and the surgical technique.

1/1

1/2 017 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--THEORY OF THE DOUBLE LAYER AT THE METAL SOLUTION INTERFACE IN THE
PRESENCE OF THE ADSORPTION OF DIPOLAR CAPILLARY ACTIVE SUBSTANCES. 1.
AUTHOR--(03)-KIRYANOV, V.A., KRYLOV, V.S., DAMASKIN, B.B.

COUNTRY OF INFO--USSR

SOURCE--ELEKTROKIMIYA 1970, 6(4), 533-41

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--METAL, AQUEOUS SOLUTION, ADSORPTION, DIPOLE MOMENT, ISOTHERM,
MOLECULAR STRUCTURE, VAN DER WALLS FORCE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1998/1127

STEP NO--UR/0364/70/006/004/0533/0541

CIRC ACCESSION NO--AP0121686

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0121686

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. KNOWING THE DISCRETE MOL. STRUCTURE OF THE ADSORBED LAYER AT A METAL SOLN. INTERFACE, THE ADSORPTION ISOTHERMS AND DIFFERENTIAL CAPACITY CURVES WERE CALCD. FOR SYSTEMS WITH EITHER DIPOLE DIPOLE OR VAN DER WAALS INTERACTION. THE INTERACTION EFFECTS OF THE DIPOLE MOMENTS OF THE ADSORBED SPECIES WITH THE METAL OR THE SOLN. WERE ALSO CONSIDERED. FACILITY: INST. ELEKTROKHM., MOSCOW, USSR.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--ADSORPTION ISOTHERM AND DIFFERENTIAL CAPACITY OF A DOUBLE LAYER AT
THE METAL SOLUTION INTERFACE IN THE CASE OF THE CHEMISORPTION OF DIPOLAR
AUTHOR--(02)-KIRYANOV, V.A., KRYLOV, V.S. *K*

COUNTRY OF INFO--USSR

SOURCE--ELEKTROKHIMIYA 1970, 6(3), 412-14

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--THERMODYNAMICS, ADSORPTION, SURFACE ACTIVE AGENT, AQUEOUS
SOLUTION, THIOUREA, SODIUM COMPOUND, FLUORIDE, ISOTHERM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1994/1939

STEP NO--02/0364/70/006/003/0412/0414

CIRC ACCESSION NO--AP0115747

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0115747

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ON THE BASIS OF THE THEORY OF DISCRETE DIPOLAR LAYER AT THE METAL SOLN. INTERFACE, REGULARITIES IN ADSORPTION OF THE SURFACE ACTIVE SUBSTANCES, WHICH INCREASE THE CAPACITANCE OF A DOUBLE LAYER, ARE CONSIDERED. AN EXAMPLE, IN WHICH ADSORPTION OF DIPOLAR CAPILLARY ACTIVE SUBSTANCES LEADS TO THIS INCREASE, APPEARS TO BE THE SYSTEM HG-AQ. SOLN. OF THIIOUREA CONTG. NAF. IN THE PRESENT PAPER, A CONCLUSION, BASED ON STATISTICAL THERMODYNAMICS CONCERNING THE ADSORPTION OF CAPILLARY ACTIVE SUBSTANCES IS DRAWN. A FORMULA WHICH DEFINES DIFFERENTIAL CAPACITY OF THE DOUBLE LAYER IS DERIVED. FACILITY: INST. ELEKTROKHM., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 621.317.34

GLEBOVIK, G. V., KRYLOV, V. V.

"Discrimination and Evaluation of Small Extended Nonhomogeneities in Transmission Lines by the Method of Pulse Reflectometry"

Dokl. Vses. nauchno-tekhn. konferentsii po radiotekhn. i sverkhvysok. T. 2 (Reports of the All-Union Scientific and Technical Conference on Radio Engineering Measurements. Vol. 2), Novosibirsk, 1970, pp 135-138 (from PZh-Radiotekhnika, No 12, Dec 70, Abstract No 12A382)

Translation: Problems of precision in determination of small extended nonhomogeneities in the wave impedance of transmission lines are theoretically analyzed. The shape of a signal reflected from a small extended nonhomogeneity is analyzed as a function of the duration of the front t_f of the probing signal. The resultant expression is not given because of its unwieldy size, but is graphically presented instead. Calculation is done for the case of a nonhomogeneity expressed by a cosine square function; analogous results are found for other symmetric forms of nonhomogeneity. Calculation is also done for nonhomogeneities of asymmetric form. The difference between two nonhomogeneities is analyzed as a function of t_f . Four illustrations, bibliography of two titles. E. L.

1/1

Welding

USSR

UDC 621.791.053.002.612:658.386

BOTINOV, S. N., KAZENNOV, YU. I., AGAPOVA, N. P., ~~PALLOMUK, M. M.~~ (Candidates of Technical Sciences), PROKHOROV, V. I., REVIZNIKOV, L. I., BOBKLEV, A. P., KRASINA, T. A., ~~KRYLOV, YE. A.~~, BALASHOV, V. D., ZINKOVSKIY, V. I., SYCHEV, R. S. (Engineers)

"Effect of Irradiation on the Properties of Welds of High-Alloy Steels and Alloys"

Moscow, Svarochnoye Proizvodstvo, No 3, Mar 70, pp 4-6

Abstract: The effect of neutron irradiation on the short-term mechanical properties of basic metals and welds from 00Kh16Ni15M3B, 0Kh16Ni15M3B, and 0Kh20Ni40B austenitic steels and 1Kh132BFR ferrite-martensite steel was investigated. The mechanical properties were determined on samples cut in the longitudinal direction from argon-arc welds using an infusible electrode. The samples were irradiated in the active zone of a reactor at about 100°C. The theoretical neutron flux density was 10^{15} neutron/cm². sec. Some samples received a dose of 2.8×10^{21} neutron/cm², while others received a dose of 4.3×10^{21} neutron/cm². The mechanical properties were determined on UMD-5 tensile testing machines at air temperatures of 20, 350, and 650°C.

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USSR

BOTINOV, S. N. et al, Svarochnoye Proizvodstvo, No 3, Mar 70, pp 4-6

Tests conducted at 20°C showed that strength properties of all samples increased after irradiation; plasticity decreased. The tensile and yield strengths of weld metals with an austenitic structure increased to a lesser degree than those of the base metals. The mechanical properties of all samples at 350° did not differ from those of the base metals. A decrease in tensile and yield strength with a simultaneous decrease in plasticity was observed in samples with an austenitic structure in tests conducted at 650°C. These decreases were especially noticeable in irradiated samples made from 40% Ni steel. The possible cause of the sharp decline in the intergrain strength and plasticity observed at 650°C in the irradiated metal with high nickel content is suggested. Orig. art. has: 2 figures, 4 tables, and 5 references.

2/2

USSR

UDC 661.143(088.8)

BORISOV, A. K., KRYLOV, YE. I., and SHUL'GIN, B. V., Ural Polytechnic Institute
"Luminescent Substance"

USSR Authors' Certificate No 321893, Cl. H 01 s 3/16, filed 19 May 70, published 31 Jan 72 (from RZh-Khimiya, No 14, 25 Jul 72, Abstract No 14N132P by N. Sh.)

Translation: To increase the chemical and thermal stability of a luminescent material and improve its chromatic characteristics, niobium and titanium in the form of oxides or chlorides are taken and their mixture with europium is activated until stoichiometry of the compound EuTiNbO_6 is attained. The composition contains (in %): 44.3-45.2 Eu_2O_3 , 34.2-35 Nb_2O_5 and 19.8-20.6 TiO_2 . This substance is chemically stable, insoluble in alkalis and many acids, and also thermostable up to 1360° , which significantly widens the sphere of its possible employment.

1/1

- 14 -

USSR

UDC 537:226:537:311:537:538

KRYLOV, Ye. I., ROZHDESTVENSKIY, F. A., PILIPENKO, G. I., DVOYNIK, V. I.

"Magnetic Properties of Orthotantalates of Transition Metals in 3d-Series"

Tr. In-ta khimii. Ural'skiy fil. AN SSSR, [Works of the Institute of Chemistry, Urals Affiliate, Academy of Sciences, USSR], No 17, 1970, pp 68-71, (Translated from Referativnyy Zhurnal Fizika, No 10, 1970, Abstract No 10 Ye 1131, from the resume).

Translation: The magnetic susceptibility of titanium and vanadium orthotantalates is measured in the 90-300°K temperature interval. EPR spectra of polycrystalline specimens of orthotantalates of titanium, vanadium, chromium, and iron are measured. Values of g-factors are also determined. Suggestions are made concerning the valence states of ions of the transition metals in the 3d-series forming compounds such as MeTiO_4 .

1/1

Thorium and Uranium

USSR

UDC 546.791.6:546.171.5

VOLCHKOV, G. N., KRYLOV, YE. I., SHAROV, V. A., and KHACHALOV, A. A., Ural Polytechnical Institute imeni S. M. Kirov, Sverdlovsk, Ministry of Higher and Secondary Specialized Education RSFSR

"Compounds of Uranyl Oxalate with Hydrazine"

Moscow, Zhurnal Neorganicheskoy Khimii, Vol 15, No 1, 1970, pp 41-42

Abstract: A study was made of products of the reaction of uranyl oxalate with hydrazine using x-ray phase, derivatographic, and chemical methods of analysis. The starting preparations included 92% H_2H_4 and $\text{UO}_2\text{C}_2\text{O}_4$. The synthesis was conducted in alcoholic medium (96% $\text{C}_2\text{H}_5\text{OH}$) to avoid displacing hydrazine from the internal coordination sphere of water, since uranium exhibits greater affinity for oxygen than for nitrogen. Synthesis of the following products is described: $\text{UO}_2\text{C}_2\text{O}_4 \cdot \text{N}_2\text{H}_4 \cdot 0.75 \text{H}_2\text{O}$ and $\text{UO}_2\text{C}_2\text{O}_4 \cdot 2\text{N}_2\text{H}_4 \cdot \text{H}_2\text{O}$. Study of the thermal decomposition of these compounds in air followed the derivatograph of the Paulik-Paulik-Erley system, along with chemical analysis of the solid decomposition products. Thermal decomposition is accompanied by endo- and exo-effects: endo-effects at 140 and 130° are caused by the release of water, exo-effects at 200, 270, and 210°C -- by dissociation of N_2H_4 or by its oxidation by air oxygen, and at 335 and 355°C -- by oxidation of the oxalate ion. The end product of thermal decomposition is U_3O_8 .

1/1

1/2 016 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--MAGNETIC PROPERTIES OF TITANIUM, VANADIUM, CHROMIUM, AND IRON
ORTHOTANTALATES -U-
AUTHOR--(05)-KASIMOV, G.G., ROZHDESTVENSKIY, F.A., KRYLOV, YE.I.,
PILIPENKO, G.I., SOLODOV, V.P.
COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSR, NEORG. MATER. 1970, 6(11), 186

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--TITANIUM COMPOUND, VANADIUM COMPOUND, CHROMIUM COMPOUND,
TANTALATE, EPR SPECTRUM, MAGNETIC SUSCEPTIBILITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/0146

STEP NO--UR/0363/70/006/001/0186/0186

CIRC ACCESSION NO--AP0054942

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--19SEP70

2/2 016

CIRC ACCESSION NO--AP0054942

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. MAGNETIC PROPERTIES OF TITAO SUB4, CRTAO SUB4, AND FETAO SUB4 WERE INVESTIGATED BY MAGNETOSTATIC AND EPR METHODS WITHIN A WIDE TEMP. RANGE, WHICH MADE IT POSSIBLE TO OBTAIN NEW DATA AS COMPARED TO THE KNOWN ONES. THE ANOMALOUS BEHAVIOR OF FETAO SUB4 AT LOW TEMPS. IS EXPLAINED BY THE PHASE TRANSITION AT 223DEGREES K, AS A RESULT OF WHICH THE TIME OF THE SPIN LATTICE RELAXATION DECREASES AND THE INTENSITY OF THE EPR SPECTRUM BECOMES INSIGNIFICANT AT THE " TEMP. THE MAGNETIC SUSCEPTIBILITY OF THE REMAINING ORTHOTANTALATES VARIES ACCORDING TO THE CURIE WEISS LAW. THE NEG. VALUE OF THE CONST. THETA ALLOWS THE ASSUMPTION OF THE PRESENCE OF ANTIFERROMAGNETISM IN THE COMPODS. INVESTIGATED.

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--13NOV70

2/2 024

CIRC ACCESSION NO--AP0115690

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SYSTEM CE SUB2-IC SUB2 O SUB4)SUB3. 10.3H SUB2 O-N SUB2 H SUB4 -H SUB2 O WAS STUDIED BY IR SPECTROSCOPY. THE COMPLEXES ARE FORMED (MU SUREFF, CURIE TEMP.): CE SUB2 (C SUB2 O SUB4). 6N SUB2 H SUB4. 7.4H SUB2 O, 2.61, 18DEGREES; CE SUB2(C SUB2 O SUB4)SUB3. 4N SUB2 H SUB4. 9H SUB2O (I), 2.37, MINUS 40DEGREES; CE SUB2(C SUB2 O SUB4)SUB3. 3N SUB2 H SUB4. 10.26 SUB2 O, 2.51 MUB, MINUS 10DEGREESEK. H SUB2 O CONTENT OF THESE COMPLEXES CHANGED EASILY. THE IR SPECTRA OF THE COMPLEXES ARE GIVEN AND A PARTIAL INTERPRETATION OF THEIR BANDS IS TABULATED. IT IS ASSUMED THAT I HAS ONLY BIDENTATE N SUB2 H SUB4 AND THE REMAINING 2 COMPOS. HAVE MONO AND BIDENTATE N SUB2 H SUB4 LIGANDS.

UNCLASSIFIED

1/2 013 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--HOLMIUM SESQUIOXIDE, NIOBIUM PENTOXIDE SYSTEM -U-
AUTHOR--(03)--KAYLOV, YE.I., KRIVONOSOV, L.B., LEONTYEV, S.A.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKADE. NAUK SSSR, NEORG. MATER. 1970, 6(1), 46-9
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--NIOBIUM OXIDE, HOLMIUM COMPOUND, RARE EARTH COMPOUND, X RAY
DIFFRACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/0849

STEP NO--UR/0363/70/006/001/0046/0049

CIRC ACCESSION NO--AP0118025

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

2/2 013

CIRC ACCESSION NO--AP0118025

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. X RAY DIFFRACTION AND CRYSTALLOCHEM. INVESTIGATIONS OF THE TITLE SYSTEM WERE PERFORMED; THE DEPENDENCE OF THE SP. ELEC. RESISTIVITY ON THE TEMP. IS ALSO DESCRIBED. THE PRESENCE OF THE COMPD. HO SUB3 NBO SUB7 WITH A CUBIC FLUORITE STRUCTURE (ALPHA EQUALS 5.23 ANGSTROM) AND OF HONBO SUB7 WITH THE MONOCLINIC FERGUSONITE STRUCTURE (ALPHA EQUALS 5.049, B EQUALS 10.902, C EQUALS 5.240 ANGSTROM, AND BETA EQUALS 94DEGREES 30 PRIME) WAS OBSD. THE FORMATION OF HO SUB3-NBO SUB7 IS ATTRIBUTED TO THE COLSENESSE BETWEEN THE FLUORITE AND THE PYROCHLORE STRUCTURES AND THE C TYPE CUBIC STRUCTURE OF RARE EARTH OXIDES. THE HOMOGENEITY REGION OF THE HONBO SUB4 PHASE IS VERY SMALL. AT ROOM TEMP., THE RESISTIVITY VALUES OF THE ORDER OF 10 PRIME11-10 PRIME13 OHM CM WERE FOUND FOR COMPOS. OF SEVERAL COMPNS. WITH INCREASING TEMP., THE SP. RESISTIVITY OF THE SAMPLES SHARPLY DECREASES, ATTAINING VALUES OF THE ORDER OF 10 PRIME6 OHM CM FOR 3:1 AND 1:3 COMPNS. AT 600DEGREES. THE PRESENCE OF A NEG. TEMP. COEFF. OF THE RESISTIVITY IN SOME TEMP. REGIONS IS A CHARACTERISTIC OF SEMICONDUCTORS. THE NEG. VALUE OF THE COEFF. IS CAUSED BY THE EXCITATION OF ELECTRONS FROM CERTAIN SOURCES, THE NATURE OF WHICH IS DISCLOSED IN THE ENERGY BANDS MODEL, AS BASED ON THE QUANTUM THEORY OF SOLIDS. FACILITY: URAL. POLITEKH. INST. IM. KIROVA. SVERDLOVSK, USSR.

UNCLASSIFIED

USSR

UDC 681.325.54.042

SUKHOV, L. N., SHLYAKHTIN, V. T., KRYLOV, Yu. D., PANDOV, V. P., and
PARAMONOV, K. G.

"A Reversible Binary Counter"

USSR Author's Certificate No 280542, Filed 12 Dec 68, Published 9 Dec 70
(from Referativnyy Zhurnal -- Avtomatika, Telemekhanika, i Vychislitel'naya
Tekhnika, No 8, 1971, Abstract No 8B138 P)

Translation: The purpose of this invention is to ensure stable operation
of a counter, given a significant level of noise. This is achieved by hav-
ing each digit position of the counter consist of two "memory" cells con-
nected in series via an AND cell, while a NOT inverter is connected to
the input of the first position. The binary reversible counter includes
an inverter, which is meant to control the counter according to the change
in potential; delay lines consisting of logical "memory" elements; logic
circuits consisting of AND cells; and memory elements consisting of
logical "memory" elements.

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- 34 -

USSR

UDC: 681.327.2

SUKHOV, L. N., SHLYAKHTIN, V. T., KRYLOV, Yu. D., PANGV, V. P., PARAMONOV, K. G.

"A Reversible Binary Counter"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratzyy, Tovarnyye Znaki, No 28, 1970, Soviet Patent No 280542, Class 21, filed 12 Dec 68, p 43

Abstract: This Author's Certificate introduces a reversible binary counter which contains digital places on "memory" cells, AND cells, and a control bus. As a distinguishing feature of the patent, operational stability is ensured in the presence of an appreciable level of industrial interference by making each digital place of the counter in the form of two "memory" cells connected in series through an AND cell, and connecting a NOT inverter to the input of the first digital place.

1/1

- 97 -

1/2 022 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--EFFECT OF ADRENOCORTICOTROPIN ON THE SYNTHESIS OF COENZYME A AND ON
THE ACETYLATED CAPACITY IN RATS -U-
AUTHOR--(02)--KRYLOV, YU.F, DUNAYEV, V.V. K

COUNTRY OF INFO--USSR

SOURCE--FARMAKOL. TOKSIKOL (MUSCON) 1970, 33(1), B2-4

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ACTH, RAT, SULFA DRUG, LIVER, CALCIUM COMPOUND, ADRENAL GLAND,
THYMUS GLAND, VITAMIN B COMPLEX, VITAMIN DEFICIENCY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1994/1180

STEP NO--UR/0390/70/033/001/0082/0084

CIRC ACCESSION NO--AP0115199

UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--09DCT70

CIRC ACCESSION NO--AP0115199

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ACTH (30 UNITS-KG, S.C.) INCREASED THE ACETYLATION OF SULFA PYRIDAZINE BY RAT LIVER AND INCREASED THE SYNTHESIS OF COA. COMBINED ADMINISTRATION OF CA PANTOTHENATE (30 MG-KG, S.C.) PREVENTED THE CHANGES IN THE WT. OF THE ADRENALS, HYPUPHYSIS, AND THYMUS BY ACTH, SUGGESTING THAT LONG TERM ADMINISTRATION OF THE HORMONE INDUCES PANTOTHENATE DEFICIENCY. FACILITY: RYAZAN. MED. INST. IM. PAVOLEVA, RYAZAN USSR.

UNCLASSIFIED

Masers

USSR

UDC: 621.395:530.145.6:53

KRYLOV, Yu. K., VOLKOV, S. A.

"A Study of the Perturbation of Light Flux by the Products Formed When a Solid is Destroyed by Intense Electromagnetic Radiation"

Tr. Leningr. in-ta tochnoy mekh. i optiki (Works of the Leningrad Institute of Precision Mechanics and Optics), 1970, vyp. 67, pp 80-93 (from RZh-
-Radiotekhnika, No 1, Jan 71, Abstract No 1D421)

[No abstract]

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USSR

UDC 612.8

KRYLOV, YU. V., and NEFEDOVA, M. V.

"Peculiarities of Auditory Adaptation in Man Under the Complex Action of Noises of Medium Intensity Under Conditions of Relative Isolation and Hypokinesia"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Biologicheskaya, No 4, 1971, pp 629-630

abstract: The threshold of audibility at frequencies of 500, 1,000, and 1,500 cycles per second was determined on a subject placed in an isolated compartment, with a background of continuous noise of constant spectrum and intensity. A tone of 1,000 cycles per second and 95 decibel intensity was then transmitted over a telephone for three minutes. The audibility thresholds were measured immediately upon shutting off at a frequency of 500 cycles per second. Fifteen minutes later the sound load was repeated, the threshold was measured at a frequency of 1,500 cycles per second, and again after 15-20 minutes, with the same sound load, at 1,000 cycles per second. Under conditions of relative isolation and adynamia with many hours of continuous medium-intensity noise a diminishing adaptational effect was observed. Evidently these conditions lead not only to restructuring of cortical processes but also affect different analyzer systems, in this case the auditory.

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- 60 -

1/2 039 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--PROBLEM OF NORMALIZING HIGH INTENSITY NOISES -U-

AUTHOR--(03)-YUGANOV, YE.M., ~~KRYLOV, YU.V.~~ KUZNETSOV, V.S.

COUNTRY OF INFO--USSR

SOURCE--KOSMICHESKAIA BIOLOGIIA I MEDITSINA, VOL. 4, JAN.-FEB. 1970, P.

38-41

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--WHITE NOISE, AUDITION, BLOOD PRESSURE, SPACE FLIGHT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAHE--1998/0288

STEP NO--UR/0453/70/004/000/0038/0041

CIRC ACCESSION NO--AP0120977

UNCLASSIFIED

2/2 039

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0120977

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE EFFECTS OF 500 HZ
114-116 AND 125-126 DB NOISE ON THE AUDITORY THRESHOLDS, BLOOD PRESSURE
AND THE TIME OF RESPONSE TO LIGHT STIMULI IN A GROUP OF 54 MALE
SUBJECTS, COVERING A TOTAL OF 152 TESTS. UNFAVORABLE EFFECTS OF 125-126
DB NOISE ON THE CARDIOVASCULAR SYSTEM AND AUDITORY AND VISUAL ANALYSORS
ARE ESTABLISHED. NOISE LEVELS OF 114-116 DB ARE ACCEPTED AS PERMISSIBLE
DURING THE ACTIVE PHASES OF SPACE FLIGHTS.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--ON PHARMACOLOGY OF THE DRUG CHLOXYL (1.4 BIS TRICHLORMETHYLBENZYL).
COMMUNICATION IV THE DYNAMICS OF CHLOXYL CONTENT IN THE BLOOD SERUM,
AUTHOR--(02)--LEBEDEVA, M.N., KRYLOVA, A.S.

COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLENI, 1970, VOL
39, NR 2, PP 195-201
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SELECTIVE DRUG EFFECT, GASTROINTESTINAL DRUG, PARASITE,
CHLORINATED ORGANIC COMPOUND, WHITE RAT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1990/1432

STEP NO--UR/0358/TD/039/002/0195/0201

CIRC ACCESSION NO--AP0109492

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--09OCT70

2/2 019

CIRC ACCESSION NO--AP0109492

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SOME ASPECTS OF ABSORPTION, ACCUMULATION AND ELIMINATION OF AN ANTIHELMINTHIC DRUG, CHLOXYL (1.4 BIS TRICHLORMETHYLBENZOL) ADMINISTERED IN AN AQUEOUS SUSPENSION OR WITH FAT CONTAINING PRODUCTS WERE STUDIED. CHLOXYL WAS DETERMINED IN BIOLOGICAL MATERIAL BY A CHEMICAL METHOD BASED ON FUJIWARA REACTION (1914). SOME GENERAL FEATURES OF THE BEHAVIOR OF THE DRUG IN THE ORGANISM WERE ESTABLISHED: RAPID ADSORPTION FROM THE GASTROINTESTINAL TRACT, A RELATIVELY LOW CONTENT IN THE BLOOD SERUM AND LONG PERSISTENCE IN THE VISCERA BOTH AFTER SINGLE AND REPEATED ADMINISTRATIONS. WHEN THE DRUG WAS DISCONTINUED, ITS CONTENT WAS OBSERVED TO DECLINE RAPIDLY. FAT CONTAINING PRODUCTS ENHANCED ABSORPTION OF CHLOXYL AND INCREASED ITS CONTENT IN THE VISCERA. THE DRUG WAS SHOWN TO BE ELIMINATED FROM THE ORGANISM MAINLY THROUGH THE BILE WITH FECES. FACILITY: LABORATORIYA FARMAKOLOGII OTDELA MEDITSINSKOY GEL'MINTOL. I KLINICHESKIY OTDEL INSTITUTA MEDITSINSKOY PARAZITOLOGII I TROPICHESKOY MEDITSINY IM. YE. I. MARTISOVSKOGO MINISTERSTVA ZDRAVOOKHRANENIYA SSSR, MOSCOW.

UNCLASSIFIED

USSR

UDC 621.396.6-181.5

GORYUSHKIN, M. I., KRYLOVA, I. A., PETLIN, Yu. A., SEMENOVA, N. V.,
USTILKO, V. Ye.

"Combining MOS and Bipolar Transistors in Integrated Circuits"

Elektron. tekhnika. Nauch.-tekhn. sb. Mikroelektronika (Electronic Technology. Scientific and Technical Collection. Microelectronics), 1971, vyp. 1(27), pp 33-38 (from RZh-Radiotekhnika, No 8, Aug 71, Abstract No 8V246)

Translation: The authors consider the possibilities of developing combination integrated elements based on MOS and bipolar transistors. Circuit characteristics may be appreciably improved by combining these devices in integrated circuits. The special technological characteristics of making integrated circuits combining MOS and bipolar transistors are described, and it is shown that the processes of making them are compatible. The characteristics of P-channel MOS and NPN bipolar transistors are presented for units made under compatible conditions on N-type epitaxial films with insulating junctions. *Issled.*

1/1

Luminescence

USSR

UDC 537.533

KRYLOVA, I. V., and KONYUSHKINA, N. I., Moscow State University imeni M. V. Lomonosov

"The Nature of Exoelectronic Emission Produced by Crystallophosphors"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 47, No 6, Jun 73, pp 1475-1478

Abstract: Single ZnS crystals containing (atomic percent) $1.2 \cdot 10^{-4}$ or $5 \cdot 10^{-3}$ Cu (ZnS·Cu), 10^{-4} Ag (ZnS·Ag), and 10^{-3} Al (ZnS·Al) were bombarded (1.5 keV) with electrons in vacuum (10^{-5} torr) in order to produce the exoemission and to learn the effect of activators (Cu, Ag, Al) on the energy spectrum. The exoemission was measured with the electronic multiplier at 20 and 300°C, first in vacuum, then in the presence of hydrogen, oxygen, water vapor, and alcohol. Curves of the heat-stimulated emission (HSE) had one main maximum at 120-130°C and two less prominent maxima at 160-180 and 210-220°C. The position and relation between these maxima indicated that they were independent on the nature of activators (Cu, Ag, Al). The HSE intensity decreased when samples were heated to 300°C in hydrogen. This intensity increased in the presence of water vapors, oxygen, and methanol. The obtained results showed that the emission takes place without participation of the conduction electrons and is governed only by transformation taking

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USSR"

KRYLOVA, I. V., and KONYUSHKINA, N. I., Zhurnal Fizicheskoy Khimii, Vol 47, No 6, Jun 73, pp 1475-1478

place in the sample adsorption layers. A presence of activators facilitated the adsorption of gases used in experiments, and in this respect had an indirect effect on the emission intensity. Adsorption of oxygen was higher on ZnS·Cu crystals, of oxygen on ZnS·Al and it was accompanied by the emission increases. There was no noticeable influence of oxygen on the HSE of ZnS·Ag. Single crystals of ZnS·Ag and ZnS·Al were sensitive to adsorption of water vapor. The intensity increase of the HSE was the highest from ZnS·Ag and ZnS·Cu in the presence of methanol. The low temperature emission (20-30°C) was strongest in the presence of water vapors.

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- 18 -

USSR

UDC 911.3.616.981.452(574)

KRYLOVA, K. T., and SHILOVA, Ye. S.

"The Epizootiological Significance of the Ecological Characteristics of the Yellow Suslik in the Aral Sea Coastal Region"

V sb. Probl. osobo opasn. infektsiy (Problems of Especially Dangerous Infections -- collection of works) Vyp. 4 (14). Saratov, 1970, pp 172-177 (from RZh-Meditsinskaya Geografiya, No 4, Abstract No 4.36.95)

Translation: The yellow suslik in the northern part of the Aral Sea coastal region is usually found along its sand masses and in packed sands. The sporadic character of the suslik population is related to intensification of activity in the area. It is usual to find, in the Aral coastal region, joint populations of yellow susliks and great gerbils (susliks populate up to 60% of gerbil colonies). This means susliks are always involved in plague epizootics. The amount of plague cultures isolated from this species is usually small, but the participation of the yellow suslik in the epizootics can be significant in some years. Susliks can apparently maintain agent survival in individual focus areas.

1/1

USSR

UDC 666.22:539.951

NEMILOV, S. V., KRYLOVA, L. A., ROMANOVA, N. V., ZIBKOVA, A. N., ALEKSEYEVA, R. A.,
NOVIKOVA, M. P., BESPAL'KO, Z. P., and TYNYANKINA, A. N.

"Viscosity of Optical Glasses"

Leningrad, Zhurnal Prikladnoy Khimii, Vol 43, No 6, Jun 70, pp 1210-1225

Abstract: The viscosity η of 120 grades of glass ($\eta = 10^2 - 10^{15}$ poises) in relation to the temperature was determined. The results are listed in tables showing values of $\lg \eta$ for various temperatures t . The values included in the tables were obtained in part by interpolation and extrapolation of experimental values to cover the complete $\eta = 10^1 - 10^{16}$ poises range ($t = 312-2000^\circ$). Determinations at $10^4 - 10^{15}$ poises were carried out by the method of pressing in described earlier, those at $10^1 - 10^4$ poises by means of GOI automatic rotational viscosimeters. Measurements of η carried out by the first method on glass No 710 of the USA National Bureau of Standards led to results which coincided with those reported by A. Napolitano and E. G. Hawkins, J. Res. Nat. Bur. Stand., A. Phys. p. Ch., 68A, 439, 1964. The rotational viscosimeters were calibrated at $10^1 - 10^4$ poises on the basis of values reported for glass No 710. Data obtained for B_2O_3 by means of these viscosimeters agreed with those reported in the literature. A glass with the composition SiO_2 69.60, B_2O_3 11.02, Al_2O_3 2.00, As_2O_3 0.10, CaO 0.05, CaF_2 1.57,

USSR

NEMILOV, S. V., et al., Zhurnal Prikladnoy Khimii, Vol 43, No 6, Jan 70,
pp 1218-1225

MgO 0.80, K₂O 4.16, Na₂O 10.23 mole % was formulated, measurements on which
in the $10^2 - 10^{13}$ poises² ($t = 600-1300^\circ$) range led to results that were readily
reproducible.

2/2

1/2 036 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--STUDY OF THE MECHANISM OF FORMATION OF POLYESTER COATINGS UNDER THE
ACTION OF ULTRAVIOLET RADIATION -U-
AUTHOR-(03)-ZUBOV, P.I., SUKHAREVA, L.A., KRYLOVA, L.M. K

COUNTRY OF INFO--USSR

SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 2, PP 218-221

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--POLYESTER RESIN, AMINE, UV RADIATION, PHOTOEFFECT,
POLYMERIZATION, PLASTIC COATING, MATERIAL DEGRADATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1993/0396

STEP NO--UR/0049/70/032/002/0218/0223

CIRC ACCESSION NO--AP0113314

UNCLASSIFIED

2/2 036

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0113314

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE EFFECT OF OCTADECYLAMINE (ODA) ON THE RATE OF FORMATION AND AGEING OF POLYESTER COATINGS UNDER THE ACTION OF ULTRAVIOLET RADIATION HAS BEEN STUDIED BY IR SPECTROSCOPY AND MECHANICAL TESTS. THE OPTIMUM AMOUNT OF ODA INCREASES THE RATE OF POLYMERIZATION AND DECREASES THE RATE OF DESTRUCTION OF COATINGS.

UNCLASSIFIED

USSR

UDC 621.317.799:538.569.4

AKVILONOVA, A. B., GORELIK, A. K., KALASHNIKOV, V. V., KRYLOVA, M. S., KUTUZA B. G., KUXHARSKAYA, N. F., MITNIK, L. M., PUZANOV, V. A., and FROLOV, Yu. A.

"Measuring the Full Absorption in a Cloudless Atmosphere in the 0.55-0.59 Range"

Moscow, V sb. X Vses. konf. no rasprostr. radiovoln. Tezisy dokl. (Tenth All-Union Conference on the Propagation of Radio Waves; Report Theses--collection of works) "Nauka," 1972, pp 8-11 (from RZh--Radiotekhnika, No 10, 1972, Abstract No 10A422)

Translation: Experimental data is given on the full absorption of radio waves in a cloudless atmosphere in the 0.55-0.59 cm range, with simultaneous recording of vertical profiles for temperature, pressure, and humidity at the observation point. Resume

1/1

- 60 -

1/2 026 UNCLASSIFIED PROCESSING DATE--0200170
TITLE--BEHAVIOR OF CHALCOGENIDE INCLUSIONS DURING THE ANODIC DISSOLUTION
OF COPPER AND NICKEL -U-
AUTHOR-(03)-GREIVER, T.N., ZAYTSEV, YU.A., KRYLOVA, M.S.

COUNTRY OF INFO--USSR

SOURCE--TSVET. METAL. 1970, 43(2), 10-12

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--COPPER, NICKEL, ELECTROLYTE, CORROSION RATE, SULFIDE, SODIUM
CHLORIDE, SULFURIC ACID, SELENIDE, TELLURIDE, DISSOCIATION CONSTANT,
OXIDATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1989/0743

STEP NO--UR/0136/70/043/002/0010/0012

CIRC ACCESSION NO--AP0107285

UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0107285

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CORROSION BEHAVIOR OF SYNTHESIZED CHALCOGENIDE INCLUSIONS IN CU AND NI WAS STUDIED AT 25, 50, AND 65 DEGREES. THE ELECTROLYTE FOR THE CU DISSOLN. CONTAINED CU 40 AND H SUB2 SO SUB4 150 G-L.; FOR NI DISSOLN. THE ELECTROLYTE CONTAINED NI 60, NA SUB2 SO SUB4 60, NA CL 50, AND H SUB3 BO SUB3 10 G-L (PH SIMILAR TO 3). FOR CU, THE OPEN CIRCUIT VOLTAGE WAS 0.10-0.15 V MORE POS. FOR THE CU CONTG. THE CHALCOGENIDE THAN IT WAS FOR PURE CU. THE POLARIZATION DECREASED IN THE SERIES CU SUB2 S GREATER THAN CU TE SUB0.8 GREATER THAN CU SUB2 TE GREATER THAN CU SE SUB0.8 GREATER THAN CU SUB2 SE AND DECREASED WITH TEMP. THUS, THE DEGREE OF OXIDN. INCREASED FROM SULFIDE SMALLER THAN TELLURIDE SMALLER THAN SELENIDE. IN MOST CASES THE DISSOLN. WAS LIMITED BY THE POLARIZABILITY OF THE CHALCOGENIDE (THE SULFIDE OR TELLURIDE); THE DEGREE OF CATHODIC CONTROL VARIED BETWEEN 70-100 PERCENT. ONLY VERY SMALL CURRENTS FLOWED DURING DISSOLN. OF NI CONTG. NI SUB3 S SUB2, NI SUB3 SE SUB2, NISE, NI SUB2 TE SUB3 OR NITE.

UNCLASSIFIED

USSR

UDC 619:612.017.1-014.482:636.32/.38

KRYLOVA, N. A., Professor, and NIZAMETDINOVA, G. A., Scientific Associate,
Kazan Veterinary Institute

"Protective Reactions in Vaccinated Irradiated Sheep"

Moscow, Veterinariya, No 11, 1971, pp 42-44

Abstract: The dynamics of properdin and nucleic acids in the blood were studied in sheep vaccinated against brucellosis with strain 19. Some of the experiments included irradiation (300 r) on the 30th vaccination day and administration of pyrogenal as adjuvant. Results demonstrated that the activity of the properdin system increased on the second vaccination day by 76%, tripled on the 5th day, and thereafter gradually approached initial indexes. The dynamics of nucleic acids are similar, except that on the 10th immunization day a second peak of nucleotide content was noted. Thus, antigen stimulation produces an activation of nonspecific indices of resistance during the first 5 days after vaccination, before the appearance of antibodies in the blood. Irradiation at the height of the vaccination process decreases significantly properdin system activity in the first 10 days of radiation sickness. Pyrogenal administered with vaccination and before irradiation stimulates the natural resistance and the immunologic reaction of sheep.

1/1

1/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--EXPERIENCE WITH CLINICAL USE OF VIBRAMYCIN --U-

AUTHOR--(05)--MIKHNEV, A.L., PTUKHA, R.M., TYDELSKAYA, I.L., KRYLOVA, N.M.,
YAKOVENKO, S.N.
COUNTRY OF INFO--USSR

SOURCE--VRACHEBNYE DELA, 1970, NR 2, PP 12-16

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BLOOD SERUM, PROTEIN, TETRACYCLINE, INFECTIOUS DISEASE,
SELECTIVE DRUG EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS---UNCLASSIFIED

PROXY REEL/FRAME--1985/0454

STEP NO--UR/0475/70/000/002/0012/0015

CIRC ACCESSION NO--AP0100932

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0100932

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. VIBRAMYCIN (DOXYCYCLIN) EXERTS A CHARACTERISTIC OF TETRACYCLINS ACTION SPECTRUM BUT IT PROVED MORE EFFICIENT THAN ITS STRUCTURAL HOMOLOGUES. TOLERANCE OF THE DRUG WAS GOOD AND ONLY TWO PATIENTS DEVELOPED VOMITING. VIBRAMYCIN PROVED HIGHLY EFFICIENT IN THE TREATMENT OF ACUTE INFECTIOUS DISEASES. THE CONCENTRATION OF DOXYCYCLIN REACHES 2.55-1.72 GAMMA-ML OF BLOOD SERUM FOLLOWING INTAKE OF 200 MG. WHICH IS SIGNIFICANTLY HIGHER THAN WITH OTHER TETRACYCLINS. FURTHER INTAKE PER 100 MG KEEPS ANTIBACTERIAL CONCENTRATION ON A HIGH LEVEL. DATA ON THE BINDING OF DOXYCYCLINE BY BLOOD SERUM PROTEINS ARE ONLY PRELIMINARY AND CONTROVERSIAL AND NEED FURTHER STUDY.

UNCLASSIFIED

KRYLOVA, N. V.

DISPOSAL OF RADIOACTIVE WASTES

JPRS 58764
17 April 1973

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CONTENTS	PAGE
Technical and Economic Aspects of Handling Liquid Waste With Intermediate and High Levels of Radioactivity (V. I. Spitsyn, et al.)	1
Study of the Possibility of Using Stimulation for Processing Highly Active Waste (K. P. Zakharenko, et al.)	14
Techno-Economic Comparison of the Methods of Solidification and Tank Storage for Highly Active Liquid Waste from the Processing of Spent Fuel Elements at Water-Cooled Water-Heated Power Reactors (L. G. Ananyeva, et al.)	36
Scientific Prerequisites for Burying Highly Active Liquid Waste in Deep Geological Formations (V. I. Spitsyn, et al.)	47
Development of Methods for Preparing the Waste from Neutron-Flux Technology for Burial (N. V. Krylova, et al.)	62

(X - UMR - R)

DEVELOPMENT OF METHODS FOR PURIFYING THE WASTES FROM NEUTRON-INDUCED FISSION FOR BURIAL

Author: N. Y. KRYLOV, V. V. KUTCHENKO, and Yu. P. MARIYANOV, State Committee for the Use of Atomic Energy of the USSR, Moscow, U.S.S.R. Publication 86-163/49, Moscow, 1977

The development of anhydrous methods of the regeneration of nuclear fuel has led to the appearance of a new type of wastes. The heavy-metal method of regeneration is based on the sublimation of volatile fluorides with subsequent fractional distillation or adsorption for deep purification of the uranium and plutonium of the other fission products (1-3).

As a result of the processing a series of wastes is formed of which contain long-lived fission products (in the future they will be called fluorinated wastes), and wastes containing easily volatile fluorides, trapped in the sorbents (Table 1).

The fluorinated wastes are solid friable substances, containing a mixture of the fluorides of long-lived fission products, including the fission products cesium-137. Depending upon the technological standards--strontium-90 and the ballast composition of the wastes may include aluminum, the fluorides of iron and aluminum, etc.

The long half-life of cesium and strontium, the considerable solubility of cesium fluoride, the high specific activity of the wastes, and the possible fragmentation into dust require a specially reliable burial for hundreds of years. Fluorinated wastes upon completion of the process are transferred to special tanks.

In connection with the high specific activity of wastes and the low coefficient of thermal conductivity of the friable materials at the center of the